

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Sheet 1 of 7

*Complete if Known*

Application Number	10/522,851
Filing Date	January 28, 2005
First Named Inventor	Lange, Daniel H.
Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	926267-100001US

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
AM	AA	US-4,685,465	08-11-1987	Klitgaard et al.	All
AM	AB	US-5,534,855	07-09-1996	Shockley et al.	col. 5, l. 36 – col. 6, l. 8 col. 6, ll. 21-66 col. 7, ll. 21-49 col. 8, ll. 35-59 col. 9, ll. 14-57
AM	AC	US-5,892,824	04-06-1999	Beatson et al.	col. 16, ll. 16-30 col. 17, ll. 25-61 col. 10, ll. 24-57
AM	AD	US-6,231,346 B1	05-15-2001	Sagi-Dolev	All
AM	AE	US-6,260,300 B1	07-17-2001	Klebes et al.	All
AM	AF	US-2001/0016311 A1	08-23-2001	Sagi-Dolev	All
AM	AG	US-6,293,904 B1	09-25-2001	Blazey et al.	col. 4, ll. 33-67 col. 5, ll. 16-59 col. 6, ll. 28-50 col. 7, ll. 12-58 col. 8, ll. 25-62 col. 9, l. 42 – col. 10, l. 24 col. 15, l. 18 – col. 16, l. 49
AM	AH	US-2001/0031071 A1	10-18-2001	Nichols et al.	All
AM	AI	US-2001/0031602 A1	10-18-2001	Sagi-Dolev	All
AM	AJ	US-6,310,966 B1	10-30-2001	Dulude et al.	All
AM	AK	US-2001/0035814 A1	11-01-2001	Uchida	All
AM	AL	US-6,335,688 B1	01-01-2002	Sweatte	All
AM	AM	US-2002/0021601 A1	02-21-2002	Chornenky	All
AM	AN	US-6,367,016 B1	04-02-2002	Lambert et al.	All
AM	AO	US-2002/0073306 A1	06-13-2002	Aluzzo et al.	All
AM	AP	US-2002/0094111 A1	07-18-2002	Puchek et al.	All
AM	AQ	US-2002/0154036 A1	10-24-2002	Flick	All
AM	AR	US-6,487,662 B1	11-26-2002	Kharon et al.	All
AM	AS	US-6,490,680 B1	12-03-2002	Scheidt et al.	col. 12, l. 58 – col. 13, l. 19
AM	AT	US-2002/0184500 A1	12-05-2002	Maritzen et al.	All
AM	AU	US-2002/0193142 A1	12-19-2002	Stavenow et al.	All

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AM	AV	US-2003/0023855 A1	01-30-2003	Keogh et al.	All
AM	AW	US-2003/0048000 A1	03-13-2003	Harter et al.	All
AM	AX	US-2003/0098774 A1	05-29-2003	Chormenky	All
AM	AY	US-2003/0098776 A1	05-29-2003	Friedli	All
AM	AZ	US-2003/0113001 A1	06-19-2003	Kato et al.	All
AM	BA	US-2003/0115165 A1	06-19-2003	Hoya	All
AM	BB	US-2003/0135097 A1	07-17-2003	Wiederhold et al.	All
AM	BC	US-6,633,090 B2	10-14-2003	Harter et al.	All
AM	BD	US-2004/0010724 A1	01-15-2004	Brown et al.	All
AM	BE	US-2004/0036574 A1	02-26-2004	Bostrum	All
AM	BF	US-2004/0091138 A1	05-13-2004	Lee	All
AM	BG	US-2004/0108377 A1	06-10-2004	Rietveld	All

FOREIGN PATENT DOCUMENT						
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AM	CA	WO 84/04815	12-06-1984	Klitgaard et al.	All	<input type="checkbox"/>
AM	CB	WO 07/15032	04-24-1997	Prima Officina Carte Valori Turati Lombardi e C. S.P.A.	All	<input type="checkbox"/>
AM	CC	WO 98/13791	04-02-1998	Westinghouse Electric Corporation	All	<input type="checkbox"/>
AM	CD	WO 00/65292	11-02-2000	Smith & Wesson Corp.	All	<input type="checkbox"/>
AM	CE	WO 00/70545	11-23-2000	Biolink Technologies International, Inc.	All	<input type="checkbox"/>

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AM	CF	EP 1 081 662 A2	03-07-2001	Oki Electric Industry Co., Ltd.	All	<input type="checkbox"/>
AM	CG	WO 01/49369 A1	07-12-2001	Medtronic, Inc.	All	<input type="checkbox"/>
AM	CH	EP 1 120 757 A2	08-01-2001	International Game Technology	All	<input type="checkbox"/>
AM	CI	WO 01/71642 A2	09-27-2001	Chornenky	All	<input type="checkbox"/>
AM	CJ	WO 02/21763 A1	03-14-2002	Mainstay Enterprises, Inc.	All	<input type="checkbox"/>
AM	CK	WO 02/27686 A1	04-04-2002	Sweatte	All	<input type="checkbox"/>
AM	CL	WO 02/057998 A1	07-25-2002	Nextgen ID	All	<input type="checkbox"/>
AM	CM	WO 02/084602 A1	10-24-2002	Van der Velden	All	<input type="checkbox"/>
AM	CN	WO 02/093330 A2	11-21-2002	Telefonaktiebolaget L M Ericsson	All	<input type="checkbox"/>
AM	CO	WO 02/098054 A1	12-05-2002	Sony Electronics Inc.	All	<input type="checkbox"/>
AM	CP	WO 03/009113 A1	01-30-2003	Direktgiro AB	All	<input type="checkbox"/>
AM	CQ	WO 03/029048 A2	04-10-2003	Snyder	All	<input type="checkbox"/>
AM	CR	WO 2004/010372 A1	01-29-2004	Banque-Tec International Pty Ltd	All	<input type="checkbox"/>
AM	CS	WO 2004/012388 A1	02-05-2004	McInnis	All	<input type="checkbox"/>
AM	CT	EP 1 418 486 A2	05-12-2004	Samsung Electronics Co., Ltd.	All	<input type="checkbox"/>
AM	CU	WO 2004/048947 A1	06-10-2004	CDEX, Inc.	All	<input type="checkbox"/>
AM	CV	WO 2004/057546 A2	07-08-2004	Motorola Inc.	All	<input type="checkbox"/>

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AM	DA	TOMPKINS, W.J., et al., "A Portable Microcomputer-Based System for Biomedical Applications," Biomedical Sciences Instrumentation, April 17-18, 1978, pp. 61-66, Vol. 14, RMBS-ISA, USA	
AM	DB	CHIEN, I.C., et al., "Computer Methods for Analysing the High-Frequency Electrocardiogram," Medical & Biological Engineering & Computing, May 1980, pp. 303-312, Vol. 18, No. 3, International Federation for Medical & Biological Engineering, England	
AM	DC	KIM, Y., et al., "Forward and Inverse High-Frequency Electrocardiography," Medical & Biological Engineering & Computing, Jan. 1981, pp. 11-22, Vol. 19, No. 1, International Federation for Medical & Biological Engineering, England	
AM	DD	ABENSTEIN, J.P., et al., "A New Data-Reduction Algorithm for Real-Time ECG Analysis," IEEE Transactions on Biomedical Engineering, Jan. 1982, pp. 43-48, Vol. BME-29, No. 1, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DE	THAKOR, N.V., et al., "A Battery-Powered Digital Modem for Telephone Transmission of ECG Data," IEEE Transactions on Biomedical Engineering, May 1982, pp. 355-359, Vol. BME-29, No. 5, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DF	TOMPKINS, W.J., "Trends in Ambulatory Electrocardiography," IEEE Transactions on Biomedical Engineering, August 1982, p. 600, Vol. BME-29, No. 8, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DG	WEISNER, S.J., et al., "A Compact, Microprocessor-Based ECG ST-Segment Analyzer for the Operating Room," IEEE Transactions on Biomedical Engineering, Sept. 1982, pp. 642-649, Vol. BME-29, No. 9, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DH	SAHAKIAN, A.V., et al., "A Microprocessor-Based Arrhythmia Monitor/Recorder for the Operating and Recovery Rooms," Medical Instrumentation, March-April 1983, pp. 131-134, Vol. 17, No. 2, University of Wisconsin, Madison, WI, USA	
AM	DI	FURNO, G.S., et al., "A Learning Filter for Removing Noise Interference," IEEE Transactions on Biomedical Engineering, April 1983, pp. 31-34, Vol. BME-30, No. 4, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	

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AM	DJ	GE, J., et al., "High-Frequency ECG Feature Recognition Using a High Level Language," Biomedical Sciences Instrumentation, April 18-19, 1983, pp. 31-34, Vol. 19, RMBS-ISA, USA	
AM	DK	THAKOR, N.V., et al., "Optimal QRS Detector," Medical & Biological Engineering & Computing, May 1983, pp. 343-350, Vol. 21, No. 3, Int'l Federation for Medical & Biological Engineering, England	
AM	DL	AHLSTROM, M.L., et al., "Automated High-Speed Analysis of Holter Tapes with Microcomputers," IEEE Transactions on Biomedical Engineering, Oct. 1983, pp. 651-657, Vol. BME-30, No. 10; IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DM	THAKOR, N.V., et al., "Design, Implementation and Evaluation of a Microcomputer-Based Portable Arrhythmia Monitor," Medical & Biological Engineering & Computing, March 1984, pp. 151-159, Vol. 22, No. 2, Int'l Federation for Medical & Biological Engineering, England	
AM	DN	THAKOR, N.V., et al., "Estimation of QRS Complex Power Spectra for Design of a QRS Filter," IEEE Transactions on Biomedical Engineering, Nov. 1984, pp. 702-706, Vol. BME-31, No. 11, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DO	PAN, J., et al., "A Real-Time QRS Detection Algorithm," IEEE Transactions on Biomedical Engineering, March 1985, pp. 230-236, Vol. BME-32, No. 3, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DP	AHLSTROM, M.L., et al., "Digital Filters for Real-Time ECG Signal Processing Using Microprocessors," IEEE Transactions on Biomedical Engineering, Sept. 1985, pp. 708-713, Vol. BME-32, No. 9, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DQ	GE, J.G., et al., "High-Frequency Electrocardiogram Analyzer," IEEE Transactions on Biomedical Engineering, Dec. 1986, pp. 1137-1140, Vol. BME-33, No. 12, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	
AM	DR	HAMILTON, P.S., et al., "Quantitative Investigation of QRS Detection Rules Using the MIT/BIH Arrhythmia Database," IEEE Transactions on Biomedical Engineering, Dec. 1986, pp. 1157-1165, Vol. BME-33, No. 12, IEEE Engineering in Medicine and Biology Society, University of Wisconsin, Madison, WI, USA	

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AM	DS	HAMILTON, P.S., et al., "Compression of the Ambulatory ECG by Average Beat Subtraction and Residual Differencing," IEEE Transactions on Biomedical Engineering, March 1991, pp. 253-259, Vol. 38, No. 3, Dept. of Electrical and Computer Engineering, University of Wisconsin, Madison, WI, USA	
AM	DT	HAMILTON, P.S., et al., "Theoretical and Experimental Rate Distortion Performance in Compression of Ambulatory ECG's," IEEE Transactions on Biomedical Engineering, March 1991, pp. 260-266, Vol. 38, No. 3, Dept. of Electrical and Computer Engineering, University of Wisconsin, Madison, WI, USA	
AM	DU	XUE, Q., et al., "Neural-Network-Based Adaptive Matched Filtering for QRS Detection," IEEE Transactions on Biomedical Engineering, April 1992, pp. 317-329, Vol. 39, No. 4, Dept. of Electrical and Computer Engineering, University of Wisconsin, Madison, WI, USA	
AM	DV	HU, Y.H., et al., "Applications of Artificial Neural Networks for ECG Signal Detection and Classification," Journal of Electrocardiology, 1993, pp. 66-73, Vol. 26 Supplement, Churchill Livingstone, Madison, WI, USA	
AM	DW	LUO, S., et al., "Parameter Evaluation of the Inverse Power-Law Spectrum of Heart Rate. A Quantitative Approach for ECG Arrhythmia Analysis," Journal of Electrocardiology, 1994, pp. 46-52, Vol. 27 Supplement, Churchill Livingstone, Madison, WI, USA	
AM	DX	PANESCU, D., et al., "A Database of Cardiac Arrhythmias," Academic Emergency Medicine, January 1995, pp. 46-49, Vol. 2, No. 1, University of Wisconsin, Madison, WI, USA	
AM	DY	AFONSO, V.X., et al., "Detecting Ventricular Fibrillation: Selecting the Appropriate Time-Frequency Analysis Tool for the Application," IEEE Engineering in Medicine & Biology, March/April 1995, pp. 152-159, Vol. 14, No. 2, USA	
AM	DZ	AFONSO, V.X., et al., "Comparing Stress ECG Enhancement Algorithms: With an Introduction to a Filter Bank Based Approach," IEEE Engineering in Medicine & Biology, May/June 1996, pp. 37-44, Vol. 15, No. 3, USA	
AM	EA	HU, Y.H., et al., "A Patient-Adaptable ECG Beat Classifier Using a Mixture of Experts Approach," IEEE Transactions on Biomedical Engineering, Sept. 1997, pp. 891-900, Vol. 44, No. 9, Dept. of Electrical and Computer Engineering, University of Wisconsin, Madison, WI, USA	
AM	EB	AFONSO, V., et al., "Use of Filter Banks in ECG Processing," Biomedical Engineering - Applications, Basis & Communications, Oct. 25, 1997, pp. 297-302, Vol. 9, No. 5, Dept. of Electrical & Computer Engineering, University of Wisconsin, Madison, WI, USA	

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AM	EC	AFONSO, VALTINO X., et al., "ECG Beat Detection Using Filter Banks," IEEE Transactions on Biomedical Engineering, February 1999, pp. 192-202, Vol. 46, No. 2, Endocardial Solutions, Inc., Saint Paul, MN, USA	
AM	ED	WIEBEN, O., et al., "Classification of Premature Ventricular Complexes Using Filter Bank Features, Induction of Decision Trees and a Fuzzy Rule-Based System," Medical & Biological Engineering & Computing, Sept. 1999, pp. 560-565, Vol. 37, No. 5, Dept. of Electrical & Computer Engineering, University of Wisconsin, Madison, WI, USA	
AM	EE	KYOSO, MASAKI, et al., "Development of an ECG Identification System," Papers from 23 rd Annual Int'l Conference of the IEEE Engineering in Medicine and Biology Society, Oct. 25-28, 2001, Dept. of Information and Computer Sciences, Kanagawa Inst. of Technology, Istanbul, Turkey	
AM	EF	HARLAND, C.J., et al., "Electric potential probes--new directions in the remote sensing of the human body," Meas. Sci. Technol. (2002) 163-169, Vol. 13, IOP Publishing Ltd., UK	

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